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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,487	08/30/2004	T V L N Sivakumar	089229.00131	4474

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EXAMINER

AJAYI, JOEL

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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11/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,487

Applicant(s)

SIVAKUMAR ET AL.

Examiner

Joel Ajayi

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mansfield (U.S. Patent Number: 6,704,346)** in view of **Treister et al. (U.S. Patent Application Number: 2002/0097681)**.

Consider **claim 1**; Mansfield discloses a method of operating a frequency hopping spread spectrum comprising a central node (master device) and a plurality of dependent nodes (slave device) configured to communicate over a time division duplexed frequency hopping channel (column 4, line 63 – column 5, line 7), a plurality of alternate time-wise frequency/time slots being allocated for central node and dependent node transmission, wherein a first dependent node is not permitted to transmit in a frequency/time slot which immediately succeeds, time-wise, a frequency/time slot in which the central node is configured to transmit a second dependent node (column 3, lines 10-25; column 4, lines 52-61), comprising: maintaining a black-list of worse-performing frequency bands for the time division duplexed frequency hopping channel; and transmitting in a frequency/time slot immediately preceding, time-wise, a frequency/time slot allocated for a dependent node transmission at a black-listed frequency band to prevent dependent node transmission at the black-listed frequency band (column 4, lines 52-61; column 7, lines 34-58).

Mansfield fails to disclose transmitting a dummy packet in a frequency/time slot.

In the same field of endeavor Treister discloses transmitting a dummy packet in a frequency/time slot (paragraph 108, lines 1 and 2; paragraph 122, lines 8-19).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Treister into the method of Mansfield in order to select communications channel based on channel performance.

Consider **claim 3**; Mansfield discloses a Bluetooth node comprising: maintaining means for maintaining a black-list of worse-performing frequency bands (column 7, lines 34-58); and transmitting means for transmitting in a frequency/time slot immediately preceding, time-wise, a frequency/time slot allocated for a slave node transmission at a black-listed frequency band (column 4, lines 52-61; column 7, lines 34-58).

Mansfield fails to disclose transmitting a dummy packet in a frequency/time slot.

In the same field of endeavor Treister discloses transmitting a dummy packet in a frequency/time slot (paragraph 108, lines 1 and 2; paragraph 122, lines 8-19).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Treister into the method of Mansfield in order to select communications channel based on channel performance.

Consider **claim 6**; Mansfield discloses a Bluetooth node comprising: a master node configured to maintain a black-list of worse-performing frequency bands for a time division duplexed frequency hopping channel (column 4, lines 52-61; column 7, lines 34-58); and a plurality of dependent nodes (column 4, line 63 – column 5, line 7) configured to communicate with the master node over the time division duplexed frequency hopping channel in a plurality of alternate time-wise frequency/time slots (column 4, lines 52-61; column 7, lines 34-58).

Mansfield fails to disclose transmitting a dummy packet in a frequency/time slot.

In the same field of endeavor Treister discloses transmitting a dummy packet in a frequency/time slot (paragraph 108, lines 1 and 2; paragraph 122, lines 8-19).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Treister into the method of Mansfield in order to select communications channel based on channel performance.

Consider **claims 2, 4, 6**; Mansfield discloses that the central node refrains from transmitting in a frequency/time slot of a black-listed frequency band (column 4, lines 52-61; column 7, lines 34-58).

Consider **claim 5**; Mansfield discloses that the step of maintaining a black-list of worse-performing frequency bands further comprises determining the black-list of worse-performing frequency bands based upon a probability of error-free transmission (interference avoidance) between the central node and a dependent node (column 7, lines 34-60).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm and Friday 7:30am to 4:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Joel Ajayi


CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER